

Eugenics Articles from Scholarly Journals

What is immoral about eugenics?

Arthur L. Caplan, Glenn McGee and David Magnus
1999, *BMJ* (British Medical Journal)

Eugenics is Alive and Well: A Survey of Genetic Professionals around the World

Dorothy C. Wertz
1998, *Science in Context*

Eugenic Sterilization

Indiana Law Journal



What is immoral about eugenics?

Arthur L Caplan, Glenn McGee and David Magnus

BMJ 1999;319;1284-

Updated information and services can be found at:
<http://bmj.com/cgi/content/full/319/7220/1284>

These include:

References

2 online articles that cite this article can be accessed at:
<http://bmj.com/cgi/content/full/319/7220/1284#otherarticles>

Rapid responses

7 rapid responses have been posted to this article, which you can access for free at:
<http://bmj.com/cgi/content/full/319/7220/1284#responses>

You can respond to this article at:
<http://bmj.com/cgi/eletter-submit/319/7220/1284>

Email alerting service

Receive free email alerts when new articles cite this article - sign up in the box at the top left of the article

Topic collections

Articles on similar topics can be found in the following collections

[Other Ethics](#) (1423 articles)
[Genetics](#) (3958 articles)

Notes

To order reprints follow the "Request Permissions" link in the navigation box

To subscribe to *BMJ* go to:
<http://resources.bmj.com/bmj/subscribers>

What is immoral about eugenics?

Downloaded from bmj.com on 26 January 2007

Arthur L Caplan, Glenn McGee, David Magnus

Center for Bioethics, University of Pennsylvania Health System, Philadelphia, PA 19104, USA

Arthur L Caplan director

Glenn McGee assistant professor

David Magnus assistant professor

Correspondence to: A Caplan caplan@mail.med.upenn.edu

BMJ 1999;319:1284

It is a “given” in discussions of genetic engineering that no sensible person can be in favour of eugenics. The main reason for this presumption is that so much horror, misery, and mayhem have been carried out in the name of eugenics in the 20th century that no person with any moral sense could think otherwise.¹⁻³ In fact, the abysmal history of murder and sterilisation undertaken in the name of race hygiene and the “improvement” of the human species again and again in this century is so overpowering that the risk of reoccurrence, sliding down what has proved time and time again to be an extremely slick, slippery slope, does seem enough to bring all ethical argument in favour of eugenics to an end.

Summary points

The horrible abuses committed in the name of eugenics through coercive policies imposed by governments have obscured the fact that eugenic goals can be the subject of choice as well as coercion

In the rush to map the human genome and reap the benefits of new genetic knowledge it has become commonplace to argue that eugenic goals will play no part in how new genetic knowledge is used

The moral case against voluntary choices to advance eugenic goals by individuals or couples has not been persuasively made

Given the power and authority granted to parents to seek to improve or better their children by environmental interventions, at least some forms of genetic selection or alteration seem equally ethically defensible if they are undertaken freely and do not disempower or disadvantage children

However, before dismissing any favourable stance towards eugenics it is important to distinguish what has happened in the past under the banner of eugenics and what might happen in the future. It is important to distinguish between genetic changes undertaken with respect to improving a group or population and genetic change that takes a single individual as its focus.

Efforts to change the genetic makeup of a group or population almost always require third parties to be involved in the personal reproductive choices of individuals and couples. Someone besides the individuals making children has to set a policy and a standard. In our century these efforts have almost always incorporated force or coercion since individuals may not agree with the policy or third parties may seek to force their vision of improvement on an unwilling population.

It is, however, a different matter for couples to undertake their own efforts to use genetic technologies and knowledge to improve the potential of their offspring. Eugenics has not, until the advent of genetic engineering, offered this option. Efforts to change the inherited genetic makeup of a particular person may be the result of third party involvement, but it is far more likely that such efforts will be the result of individual reproductive choice.⁴ To put the point another way, population eugenics involves commanding people to produce desired genotypic or

phenotypic traits. This sort of eugenics is not the same as allowing an individual or couple voluntarily to choose a heritable trait in their sperm, egg, embryo, or fetus, motivated by their view of what is good or desirable.

The most common arguments against any attempt to either avoid a trait through germline genetic engineering or to create more children with desired traits fall into three categories: worries about the presence of force or compulsion, the imposition of arbitrary standards of perfection,⁴ or inequities that might arise from allowing the practice of eugenic choice.⁵ The first worry is not one that seems insurmountable as an objection to allowing individual choice about germline changes. The latter two may also not discount eugenic choices.

Coercion

Certainly it is morally objectionable for governments or institutions or any third party to compel or coerce anyone's reproductive behaviour.¹⁻³ The right to reproduce without interference from third parties is one of the fundamental freedoms recognised by international law and moral theories from a host of ethical traditions. However, the goals of obtaining perfection, avoiding disease, or pursuing health with respect to individuals need not involve coercion or force.

A couple may wish to have a baby who has no risk of inheriting Tay-Sachs disease or transmitting sickle cell disease. Or they may want a child with a particular hair colour or sex. If their choice is free and informed then there is no reason to think that such a choice is immoral on grounds of force or coercion.

The subjectivity of perfection

Some who find the pursuit of perfection morally objectionable worry about more than coercion. They note that it is simply not clear which traits or attributes are properly perceived as perfect or optimal. The decision about what trait or behaviour is good or healthy depends on the environment, culture, and circumstances that a child will face. Stigma and prejudice need not be the inevitable result of choice.

Views about what is perfect or desirable in a human being are, more often than not, matters of taste, culture, and personal experience. But they are not always simply the product of subjective feelings. There are certain traits—physical stamina, strength, speed, mathematical ability, dexterity, and acuity of vision, to name only a few—that are related to health in ways that command universal assent as to their desirability. It would



The next generation: will they be designer babies?

be hard to argue that a parent who wanted a child with better memory or greater physical dexterity was simply indulging his or her biases or prejudices. As long as people are not forced to make choices about their children that are in conformity with particular visions of what is good or bad, healthy or unhealthy, there would seem to be enough consensus about the desirability of some traits to permit parents to make individual choices about the traits of their children in the name of their health. And if no coercion or compulsion were involved it could even be argued that parents should be free to pick the eyebrow shape or freckle pattern of their children or other equally innocuous traits as long as their selection imposed no risk for the child, did not compromise the child's chance of maximising his or her opportunities, or lead to parents becoming overly invested in superficial aspects of the child's appearance or behaviour.^{4 6}

A parent might concede that their vision of perfection is to some degree subjective but still insist on the right to pursue it. Since we accept this point of view with respect to child rearing, allowing parents to teach their children religious values, hobbies, and customs as they see fit, it would be difficult to reject it as overly subjective when matters turn to the selection of a genetic endowment for their child.

For many years cosmetic surgeons, psychoanalysts, and sports medicine specialists have been plying their trades without all people with big noses or poor posture feeling they need to visit specialists to have these traits altered. Some people choose to avail themselves of these specialists in the pursuit of perfection. Many do not. If there is a slope from permitting individual choice of one's child's traits to limiting the choices available to parents it is a slope that does not start with individual choice. And if there is a problem of a slope then it must be shown why it is morally permissible for parents to seek betterment after a child is born but why such efforts are wrong if genetic alteration is used. There is nothing terrible about subjectivity in a decision to indulge preferences about the traits of one's child as long as those preferences do nothing to hurt or impair the child.

Downloaded from bmj.com on 26 January 2007

Another objection to allowing eugenic desires to influence parenting is that this will lead to fundamental social inequalities.⁵ Allowing parental choice about the genetic makeup of their children may lead to the creation of a genetic "overclass" with unfair advantages over those who parents did not or could not afford to endow them with the right biological dispositions and traits. Or it may lead to homogenisation in society where diversity and difference disappear in a rush to produce only perfect people, leaving anyone with the slightest disability or deficiency at a distinct disadvantage. Equity and fairness are certainly important concepts in societies that are committed to the equality of opportunity for all. However, a belief that everyone deserves a fair chance may mean that society must do what it can to insure that the means to implementing eugenic choices are available to all who desire them. It may also mean that a strong obligation exists to try and compensate for any differences in biological endowment with special programmes and educational opportunities. It is hard to argue in a world that currently tolerates so much inequity in the circumstances under which children are brought into being that there is something more offensive or more morally problematic about biological advantages as opposed to social and economic advantages.

It is difficult to argue in a world that tolerates the creation of homogeneity through the parental selection of schools, music lessons, religious training, or summer camps that only environmentally engineered homogeneity is morally licit. The fact that those people with privileged social backgrounds go on to similar sorts of educational and life experiences does not seem sufficient reason to interfere with parental choice.

No moral principle seems to provide sufficient reason to condemn individual eugenic goals. While force and coercion, compulsion and threat have no place in procreative choice, and while individual decisions can have negative collective consequences, it is not clear that it is any less ethical to allow parents to pick the eye colour of their child or to try and create a fetus with a propensity for mathematics than it is to permit them to teach their children the values of a particular religion, try to inculcate a love of sports by taking them to football games, or to require them to play the piano. In so far as coercion and force are absent and individual choice is allowed to hold sway, then presuming fairness in the access to the means of enhancing our offsprings' lives it is hard to see what exactly is wrong with parents choosing to use genetic knowledge to improve the health and wellbeing of their offspring.

- 1 Annas G, Grodin M, eds. *The Nazi doctors and the Nuremberg Code*. New York: Oxford University Press, 1992.
- 2 Caplan A, ed. *When medicine went mad*. Totowa, NJ: Humana, 1990.
- 3 Reilly P. *The surgical solution*. Baltimore: Johns Hopkins University Press, 1991.
- 4 McGee G, ed. *The perfect baby*. New York: Rowman and Littlefield, 1997.
- 5 Kitcher P. *The lives to come*. New York: Touchstone, 1997.
- 6 McGee G. Parenting in an era of genetics. *Hastings Center Report* 1998;28:84-5.

DOROTHY C. WERTZ

Eugenics Is Alive and Well: A Survey of Genetic Professionals around the World

The Argument

A survey of 2901 genetics professionals in 36 nations suggests that eugenic thought underlies their perceptions of the goals of genetics and that directiveness in counseling after prenatal diagnosis leads to individual decisions based on pessimistically biased information, especially in developing nations of Asia and Eastern Europe. The "non-directive counseling" found in English-speaking nations is an aberration from the rest of the world. Most geneticists, except in China, rejected government involvement in premarital testing or sterilization, but most also held a pessimistic view of persons with genetic disabilities. Individual, but not state-coerced, eugenics survives in much modern genetic practice.

Introduction

The word "eugenics" has many different meanings. According to at least some of these, eugenic thought and practice are flourishing today in modern genetics in large parts of the world, especially in developing nations. Most people today think of eugenics as a coercive social program enforced by the state for the good of society, although many people prominent in the Eugenics Movement of the nineteenth and early twentieth centuries favored an individual, voluntary eugenics based on the free choices of enlightened parents.¹ As Paul and others have pointed out, however, "freedom of choice" may be compromised by economic and cultural forces, including societal views about disability (Paul 1992; Wertz 1993; Wertz and Fletcher 1993).

This paper explores the views of 2901 genetics professionals in 36 nations who responded to a larger survey about ethical issues in medical genetics. The survey avoided the word "eugenics" because of its extremely negative connotations in most nations, but asked questions about the goals of genetics, state involvement

(including mandatory sterilization), counseling after a prenatal diagnosis that reveals a fetus with a genetic condition, whether people with genetic disabilities that are transmissible to the children should become parents, and general attitudes toward the place of disability in society. The paper concludes with a discussion of the ethics of individual voluntary eugenics and the meaning of "voluntary" when genetic services are state-financed, when a nation has few public health-care resources, and when both medical culture and popular culture hold pessimistic views of disability.

Methods

In 1994–1996, we surveyed all geneticists in the 36 nations with 10 or more practicing genetics professionals (some areas of the world, such as sub-Saharan Africa, have few geneticists). In each nation, a geneticist colleague compiled a listing of practicing genetics professionals and distributed and collected (by mail) the questionnaires, which were answered anonymously. The names of our 36 colleagues appear in the acknowledgments at the end of this paper. In the United States, all persons certified by the American Board of Medical Genetics (including Master's-level counselors) as of 1992 were included. The American Board certified both M.D. and Ph.D. medical geneticists, as well as Master's-level genetic counselors (a specialty rarely found outside the United States). Most other countries (except Canada and Hungary) did not have special certification in medical genetics; therefore, our geneticist colleague in each country was asked to select people who were practicing in medical genetics, regardless of their degree or specialty. This led to inclusion of genetic nurses in South Africa and the United Kingdom, and midwives (who do most of the prenatal counseling) in Poland. Persons who did not spend the majority of their time in medical genetics, such as primary care physicians, were excluded.

In a separate but related survey, we surveyed a random sample of 852 primary care physicians in the United States, taken from the American Medical Association (AMA) Physician Masterfile (obstetricians, pediatricians, and family practitioners, all certified by their specialty boards) but not certified in genetics, using some questions from the geneticist survey. In addition, we surveyed a sample of 710 first-time visitors to ten U.S. and three Canadian general genetics clinics, before counseling. Clinic personnel mailed out the questionnaires to all patients before scheduled appointments. They were returned to us anonymously.

Questionnaires included a range of fifty ethical questions, covering a wide range of situations that might occur in the practice of medical genetics. Most were presented as case vignettes, but there were also some more general opinion questions. Topics included privacy of genetic information, disclosure of ambiguous test results, access to banked DNA, testing in the workplace, testing children

persons with genetic disabilities, prenatal diagnosis for sex selection or paternity testing, attitudes toward disability, nondirectiveness versus directiveness in counseling, and personal attitudes toward abortion. Responses for a sub-set of questions related to eugenics are reported for the first time in this paper. Responses for other types of questions, notably on privacy and on sex selection, have been reported elsewhere (Wertz 1997a, 1997b, 1997c, Wertz and Fletcher 1998).

The geneticist questionnaire took approximately two hours to complete. Our geneticist colleagues in the various nations translated the questionnaires into 12 languages: Chinese, Czech, French, German, Hebrew, Japanese, Polish, Portuguese, Russian, Spanish, Thai, and Turkish. Each translation was back-translated into English by an independent translator to check for accuracy. Patient questionnaires, which were shorter, translated medical conditions into lay language that described major symptoms; these questionnaires used the same cases and questions as the geneticist questionnaires. All questionnaires were anonymous. They did, however, include basic sociodemographic data, both professional and personal. After each question or case vignette respondents were given a checklist of three to five possible courses of action. Respondents were also asked to write, in their own words, their reasons for choosing a particular answer (from the checklist) to a question. Their responses were translated into English and the translation checked by an independent person.

Of the 4607 genetics professionals asked to participate, 2901 (63 per cent) responded (see table 1). In the separate non-geneticist physician and patient surveys, 499 (59 per cent) primary care physicians and 476 (69 per cent) patients responded. Most patients were women (91 per cent), white (89 per cent), middle income (US \$25,000–45,000), and working class, with a median of 13 years education.

All responses were entered into an SPSSX (Statistical Package for the Social Sciences) program. "Write-in" comments were codified according to a system developed by the author for an earlier survey in 19 nations (Wertz and Fletcher 1989). The author was responsible for analyzing the data. The following paper concentrates on the international geneticist survey, but mentions patient and primary care physician surveys for purposes of comparison within the U.S.

Goals of Genetics: "Cleaning up the Gene Pool"

Before examining practice, it is important to look at how geneticists conceptualize their own goals. Most people would probably agree that means taken to directly reduce the number of asymptomatic carriers of recessive genes is a truly coercive "eugenic" goal. Attempts to reduce the frequency of a gene that go beyond the prevention of birth defects through clinical measures such as contraception or abortion would be highly ineffective, besides preventing the birth of large numbers

likelihood that carriers of recessive genes will marry other carriers is small, even for common genes such as cystic fibrosis, and even then, each child has a three in four chance of not having the disorder. Furthermore, even attempting to reduce the frequency of a recessive gene in a population by voluntary non-reproduction of all affected individuals would be close to impossible.

Table 1. Survey Response Rates

<i>Country</i>	<i>Invited to participate</i>	<i>Responded</i>	<i>% Responding</i>
Argentina	35	19	54
Australia	26	15	58
Belgium	40	15	38
Brazil	131	74	56
Canada	212	136	64
Chile	25	16	64
China	392	252	64
Colombia	27	14	52
Cuba	96	14	16
Czech Republic	137	81	59
Denmark	54	28	52
Finland	53	22	42
France	102	75	74
Germany	418	255	61
Greece	12	12	100
Hungary	78	36	46
India	70	23	33
Israel	27	23	85
Italy	23	21	91
Japan	174	113	65
Mexico	89	64	72
Netherlands	41	27	66
Norway	18	9	50
Peru	16	14	88
Poland	250	151	60
Portugal	22	11	50
Russia	66	46	69
South Africa	21	16	76
Spain	82	51	62
Sweden	15	12	80
Switzerland	10	6	60
Thailand	28	25	89
Turkey	30	22	73
UK	217	102	47
USA	1538	1084	70
Venezuela	22	16	73

For a recessive condition with a disease incidence of 1 in 2000 and a gene frequency of about 1 in 45, if all people with the condition refrained from reproducing, it would take 18 generations (500 years) to reduce the disease incidence by half. For rarer disorders, a similar reduction would take far longer. Mandatory population screening, followed by mandatory sterilization of carriers, could theoretically eliminate a gene, except in the many disorders with high rates of new mutations. If ever implemented, mandatory programs would remove a sizable percentage of the population, given that 5 per cent of Europeans carry a cystic fibrosis mutation, and about one-third of Nigerians carry a gene for sickle-cell anemia. A program that screened for carriers of genes for a number of different recessive or X-linked disorders could quickly lead to sterilization of the majority of the population.

Nevertheless, the majority of geneticists in 12 out of the 36 nations agreed with the statement: "An important goal of genetic counseling is to reduce the number of deleterious genes in the population." These nations and the percentages of agreement were China (100 per cent), India (87 per cent), Turkey (73 per cent), Peru (71 per cent), Spain (67 per cent), Poland (66 per cent), Russia (58 per cent), Greece (58 per cent), Cuba (57 per cent), Mexico (52 per cent), Venezuela (50 per cent), and Thailand (50 per cent). Over one third in another five countries (the Czech Republic, Hungary, Portugal, Brazil, and Colombia) also agreed with the statement. Most countries where geneticists favored this goal were developing nations or Eastern European nations. This pattern appeared in regard to other questions related to eugenics and points to the economic underlay of eugenic thought.

Eugenics as an Openly Stated Goal

In China, all 252 respondents declared, in their "write-in comments" explaining reasons for their choices of responses, that eugenics was the major goal of genetics. They defined eugenics as "improving the population quality and reducing the population quantity" (Mao and Wertz 1997). Most Chinese geneticists are unaware of the history of eugenics in the West and of the negative connotations of the word for Westerners.

China was not alone. Openly stated approvals of eugenics as a goal of genetics also appeared in comments from India, the Czech Republic, Hungary, Thailand, Russia, and Greece. Some commentators said that geneticists should revive the use of the word and not let the Nazi experience ruin its original meaning of "having a healthy baby." They equated "prevention," which is a professionally accepted goal in most of the world, with "eugenics." Clearly the profession of genetics in many countries has an open or thinly-disguised eugenic goal.

Individual Eugenics: Directive Genetic Counseling

In the modern world, eugenics is sometimes described as the result of individual choices after genetic counseling. Philip Kitcher (1996) speaks of a "laissez faire eugenics" based on the free and informed choices of individuals and couples, most of whom presumably want a baby that is as healthy as possible. Kitcher regards this form of eugenics as not only benign, but ethically desirable, because it would reduce the burden of suffering arising from genetic disease. However, Kitcher's "free choices" depend upon the full and honest presentation of information in genetic counseling, and also on a fairly high level of knowledge among the public. In the absence of adequate and unbiased information, these "free choices" become impossible, and genetic counseling becomes a means of furthering underlying goals of genetic professionals.

Around the world, most genetic counseling after prenatal diagnosis is directive. The "non-directive counseling" found in English-speaking nations, with counselors presenting information in as unbiased a form as possible and then telling people that they should make their own decisions, is an aberration from the more general practice of giving advice. In many nations, the explicit or implicit advice is to terminate the pregnancy (see table 2). Although substantial percents (shown in parentheses in table 2) would openly urge people to terminate, the preferred way of getting them to terminate is usually to present purposely slanted information or to "emphasize the negative aspects so they will favor termination without suggesting it directly." Giving slanted information is more insidious than openly telling people what to do, and verges on propaganda. Usually patients have no reason to suspect the veracity of information presented as scientific or medical truth and do not question this information. The professional, as the expert and guardian of information, is in a unique position of power to influence people while appearing to let them make their own decisions.

What people actually do in professional practice may depart considerably from what they say they would do in response to questionnaires. I would like to suggest that the data in table 2 underestimate the amount of directive, pessimistic counseling. So much has been written for the past 20 years about non-directive counseling as the most ethical approach, starting with Fraser's 1974 article, that many professionals are reluctant to show open evidence of directiveness.

Table 2 shows a pattern that extends across the six different conditions described. English-speaking nations have comparatively little pessimistic counseling, with the exception of South Africa. Northern European nations are more pessimistic, but with considerable variation. Belgium, France, and Sweden appear to offer the most pessimistic counseling, while the Netherlands and Germany are the least pessimistic. The Netherlands has excellent services for people with disabilities and an active patient support organization, which may affect counseling. In Germany, the genetics profession is strongly influenced by inherited guilt about the Third

Table 2. Per Cent who Would Give Pessimistically Slanted Information* after Prenatal Diagnosis (n=2901 Genetics Professionals)
(In Parentheses: Per Cent who Would Urge Termination of Pregnancy)

English Speaking Nations	Severe, open spina bifida	Trisomy 21 (Down Syndrome)	Disorder				XXY (Klinefelter Syndrome)
			Cystic Fibrosis	Sickle Cell Anemia	Achondroplasia**		
Australia	47 (13)	27	13	7	20		0
Canada	30 (7)	9 (2)	5	8 (1)	4 (1)		2 (2)
South Africa	69 (13)	44 (25)	44 (13)	13 (7)	25		13
United Kingdom	38 (3)	14 (2)	10	6	4		0
United States	28 (5)	13 (3)	9 (1)	6	6 (1)		5
(U.S. primary care physicians n=499)	42 (20)	23 (10)	21 (8)	18 (5)	n/a		15 (6)
<i>Northern/Western Europe</i>							
Belgium	80 (33)	71 (14)	67 (20)	53 (13)	27 (7)		7 (7)
Denmark	68 (36)	42 (23)	42 (23)	24 (8)	27 (15)		8
Finland	48 (10)	24 (5)	29 (10)	39 (5)	14		5
France	82 (27)	66 (21)	59 (22)	38 (12)	20 (7)		1 (1)
Germany	49 (21)	23 (6)	23 (6)	15 (5)	13 (3)		3
Netherlands	58 (12)	19 (4)	19	11	15 (7)		0
Norway	33 (22)	22	22	22	11		0
Sweden	66 (8)	58 (8)	58	58 (8)	36 (9)		0
Switzerland	33 (17)	33 (17)	33 (17)	33 (17)	17		17 (17)
<i>Southern Europe</i>							
Greece	92 (50)	83 (50)	92 (50)	75 (33)	83 (50)		50 (17)
Italy	57 (19)	50 (15)	38 (10)	24 (10)	15		14
Portugal	64 (36)	46 (18)	36 (18)	36	55 (9)		27 (18)
Spain	55 (47)	40 (27)	36 (30)	27 (18)	25 (15)		13 (2)
<i>Eastern Europe</i>							
Czech Republic	91 (61)	92 (62)	86 (38)	63 (24)	74 (38)		45 (21)
Hungary	83 (50)	75 (42)	75 (36)	50 (11)	54 (29)		44 (8)
Poland	65 (32)	35 (11)	37 (9)	27 (5)	23 (7)		22 (6)
Russia	88 (67)	89 (68)	69 (29)	60 (38)	77 (30)		64 (38)
<i>Near East</i>							
Israel	77 (23)	73 (18)	45 (5)	41 (9)	55 (14)		18
Turkey	77 (27)	77 (32)	64 (23)	55 (23)	51 (5)		50 (14)
<i>Asia</i>							
China	98 (89)	96 (90)	95 (82)	91 (67)	92 (77)		92 (73)
India	100 (74)	73 (59)	82 (55)	68 (36)	57 (22)		68 (32)
Japan	49 (16)	37 (15)	44 (12)	24 (5)	37 (20)		23 (9)
Thailand	84 (12)	76 (24)	76 (16)	72 (8)	56 (16)		44 (8)
<i>Latin America</i>							
Argentina	23 (8)	23 (8)	0	8 (8)	0		0
Brazil	49 (25)	35 (15)	32 (10)	21 (3)	23 (10)		21 (7)
Chile	13	0	0	0	0		0
Colombia	46 (27)	50 (33)	25 (17)	0	17		17
Cuba	100 (71)	93 (50)	93 (64)	93 (64)	71 (36)		84 (29)
Mexico	82 (67)	59 (44)	47 (29)	35 (18)	19 (11)		16 (13)
Peru	79 (43)	29 (21)	31 (23)	31 (23)	14 (14)		0
Venezuela	67 (47)	50 (36)	47 (40)	50 (36)	21 (7)		7 (7)

* On questionnaire: "Emphasize negative aspects so they [the parents] will favor termination of pregnancy"

affected fetuses. There were significant differences between the responses of West German and former East German geneticists, with the former East Germans showing a pattern close to other East European nations (Cohen and Wertz 1997). In Southern Europe, Greece stands out as providing the most pessimistic counseling. Counseling in Eastern Europe, the Near East, and Asia was overwhelmingly pessimistic, especially in China, India, and Thailand. Poland and Japan were exceptions in their areas, probably because of strong Catholic anti-abortion sentiments in Poland and the influence of United States ethical views about non-directive counseling in Japan, where the statements of the genetics profession closely parallel those in the United States. In Latin America, strong anti-abortion sentiments in Argentina and especially Chile led to a relative absence of pessimistic counseling. At the other extreme, Cuban geneticists were overwhelmingly pessimistic, which may be understandable in a country where food has been in short supply, the society is able to provide little support for people with disabilities, and most people feel no religious or moral opposition toward abortion. There was also much pessimistic counseling in Mexico and Venezuela.

Many geneticists apparently believe that pessimistic counseling accords with generally accepted views in most nations that the goal of genetics is prevention of "birth defects," whether by prenatal nutrition (folic acid to prevent spina bifida), contraception, prenatal diagnosis and abortion, or diagnosis and treatment of newborns. The problem of eugenics arises when one considers who has the power to decide what should be prevented. Who defines what constitutes a "birth defect"? Who decides what, if any, prevention measures should be used? Individual professionals, public policy makers, ethnic groups, and individual families may regard a particular genetic condition as worth avoiding by termination of pregnancy; others may regard that same condition as acceptable. Although many professionals apparently believe that they have a moral obligation, based on the principle of beneficence, to steer families toward termination of pregnancy, practices placing the ultimate power of decision-making in the hands of anyone other than the family may be considered eugenic. In genetics, information is power.

The six genetic disorders listed in table 2 cover a spectrum of severity, from severe spina bifida to two disorders — achondroplastic dwarfism and XXY (Klinefelter syndrome) — that many professionals consider relatively mild, because individuals can function well in normal life, given adequate support. Boys with XXY are infertile and sometimes have learning difficulties, but can reach puberty with medical assistance and lead normal family lives. The pattern of counseling for this sex chromosome disorder shows no apparent effect of cultural "machismo" (admiration of exaggerated masculine characteristics). Instead, broader economic and cultural patterns dominated the approach to all disorders.

There was little optimistic counseling ("emphasize positive aspects so they will carry to term" or "urge parents to carry to term") for any of the disorders in table 2. In all, 2 per cent would counsel optimistically for severe spina bifida, 6 per cent for Trisomy 21 (Down syndrome), 6 per cent for

sickle-cell anemia, 13 per cent for achondroplasia, and 23 per cent for XXY. The rest said they would "be as unbiased as possible."

Many geneticists said they felt "dissatisfied if parents decide to carry a seriously affected fetus to term." Majorities in nine nations (Belgium, Greece, Czech Republic, Hungary, Russia, Turkey, China, India, and Cuba) agreed with this statement. Substantial minorities (over one-third) in another 11 nations also agreed (South Africa, France, Norway, Switzerland, Spain, Israel, Brazil, Colombia, Mexico, Peru, Venezuela).

In sum, "individual eugenics" is prevalent, not as free choice, but as part of the explicit (China) or implicit goals of professionals. These goals may reflect felt social needs. The national patterns in table 2 ran throughout responses to all questions related to government involvement, responsible parenthood, and disability. The nations with the most pessimistic counseling were all (except Greece and Belgium) from the developing world or from formerly Communist Eastern Europe. Some (China, India, and until recently, Mexico) have major overpopulation problems. Cuba is struggling with an economic embargo. Pessimistic counseling may be realistic counseling under these circumstances, but it denies prospective parents the opportunity to make their decisions on the basis of complete and unbiased information, and also denies any possibility that the child may make a contribution to society.

Social Eugenics: "Responsible Parenthood"

Many professionals agreed that "it is socially irresponsible knowingly to bring an infant with a serious genetic disorder into the world in an era of prenatal diagnosis." Majorities in 19 nations (South Africa, Belgium, Greece, Portugal, Czech Republic, Hungary, Poland, Russia, Israel, Turkey, China, India, Thailand, Brazil, Colombia, Cuba, Mexico, Peru, and Venezuela) agreed with this statement, as did 26 per cent of U.S. geneticists, 55 per cent of U.S. primary care physicians, and 44 per cent of U.S. patients. Germany (8 per cent) and Chile (0 per cent) had the fewest agreeing, Germany because of the shadow of the Third Reich and Chile because of Catholic anti-abortion sentiment.

Majorities in 24 nations thought that "it is not fair to a child to bring it into the world with a serious genetic disorder." Exceptions were Australia (27 per cent), Canada (40 per cent), United Kingdom (36 per cent), United States (40 per cent), Finland (36 per cent), Germany (18 per cent), the Netherlands (33 per cent), Sweden (25 per cent), Switzerland (33 per cent), Japan (18 per cent), Argentina (29 per cent), and Chile (40 per cent). In the U.S., 52 per cent of primary care physicians and 46 per cent of patients agreed with the statement.

There was widespread support, however, for people's rights to choose their mates even if these choices increased their personal risks of having children with

in most nations (except the Czech Republic, China, India, Colombia, Peru, and Venezuela) disagreed with the statement that "people who carry a recessive gene should not mate with another carrier of the same recessive gene." Nations where geneticists supported rights of carriers to marry each other included those with the strongest opposition to prenatal diagnosis and abortion (Chile, Poland, Spain). There was no consensus in Northern Europe or English-speaking nations about whether people should know their own and their partner's carrier status before marriage. Majorities in all nations of Southern and Eastern Europe, the Near East, Asia (except Japan), and Latin America (except Chile) agreed that they should, as did 66 per cent of U.S. primary care physicians and 65 per cent of patients.

Majorities in all nations except Australia, Canada, the United Kingdom, the United States, Germany, the Netherlands, Switzerland, and Japan thought that "women should have prenatal diagnosis if medically indicated by age or family history." English-speaking nations rejected this statement because of beliefs about women's autonomy. The "should have" was too strong a statement. Instead, women should be able to make a choice, and should be able to refuse prenatal diagnosis. In both Switzerland and Germany, there has been popular opposition to prenatal diagnosis as a "eugenic" practice, and in Japan there is professional concern about eugenics. Interestingly, 38 per cent of U.S. genetics professionals, 78 per cent of U.S. primary care physicians and 81 per cent of patients thought women should have prenatal diagnosis. It appears that prenatal diagnosis has become part of medical culture in most of the world, without any conscious connection with eugenics. If followed by the type of directive counseling previously described, however, it could have a eugenic effect.

In contrast to the pessimistic counseling, there was widespread support for parenthood for persons with disabilities. Large majorities in English-speaking nations, northern and southern Europe, the Near East and Latin America would support the decision of a blind couple, 100 per cent of whose children would be blind, to have a child. Many respondents said that blind people could have fulfilling lives. Exceptions were the Czech Republic, Russia, China, India, Thailand, and Peru. Majorities in 25 nations would support the decision of a cystic fibrosis carrier-carrier couple to take their chances (25 per cent) of having a child with cystic fibrosis.

Majorities in 22 nations would support the decision of a woman with fragile-X, living in an institution for people with mental retardation, to become a mother, although the condition that has caused her retardation will likely be more severe in her children. Exceptions were nations in Eastern Europe and Asia where the counseling in table 2 was the most pessimistic. The respect accorded to choices of these prospective parents with disabilities may point to a growing respect for autonomy that may in the future counteract the eugenic tendencies now present in counseling.

In sum, there is widespread belief among genetics professionals that parents

the world. In China, the child becomes a person by virtue of belonging to and being accepted by society. Society therefore should ensure that children who are born will be of a "quality" that will be acceptable to the society as a whole. Children who will not be accepted (including the children of single mothers) should not be born.

Although geneticists in North America and Europe tend to see the counseling situation as an individual professional-patient relationship and may claim that they are not influenced by economics or society, there is nevertheless some belief that parents have a social responsibility to avoid bringing children with serious disorders into the world.

Geneticists in most nations do not believe in restricting marriage, but most believe that responsible parents should have prenatal diagnosis if medically indicated. Most would support the choices of prospective parents with inheritable disabilities, except in the nations of Eastern Europe or Asia with the most pessimistic views.

Government Involvement in Eugenic Practice

Government involvement in genetics may take several forms, including mandatory sterilization, required carrier tests before marriage, and mandatory newborn screening for the primary purpose of identifying and counseling carrier parents before they have another child.

Sterilization

Few geneticists (about 5 per cent) supported mandatory sterilization, even in the extreme case of a single blind woman on public welfare who has already had three blind children by three different men (all absent from the household) and who wants to continue having children with a 50 per cent risk of blindness. There were some notable exceptions, however; 82 per cent in China, 50 per cent in India, 28 per cent in Thailand, 23 per cent in Russia, and 19 per cent in Chile thought the law should require sterilization, as did 21 per cent of patients in the United States. Thus it appears that most professionals in most countries reject one of the worst abuses attached to eugenics, coercive sterilization of the socially and medically "unfit." However, the percentages in favor serve as a reminder that belief in coercive eugenics remains alive in countries with economic problems compounded by problems of expanding population. There is also a likely undercurrent of eugenic thought among the public in developed nations, especially in the socioeconomic groups (such as represented by our U.S. working class patient respondents) that are most resentful of people on public welfare.

Premarital Testing

In eight countries, majorities thought that "governments should require carrier tests for common genetic disorders like cystic fibrosis and sickle-cell anemia before marriage." These countries were Greece, Russia, Turkey, China, India, Thailand, Cuba, and Peru. Greece has previously experimented with laws requiring premarital carrier testing for thalassemia. The experiment was unsuccessful, because many people (including doctors) lied in order to avoid the stigma attaching to carrier status. Even today, the requirement for premarital screening in Cyprus is a requirement of the Greek Orthodox Church, not the government. Carriers may marry each other, as long as they are aware of each other's carrier status. In view of previous experience, it appears surprising that a majority of Greek respondents favored mandatory screening. The other country using mandatory premarital counseling and screening (only for those with a family history of "inheritable" disease or mental illness) is China, under the Maternal and Infant Health Care Act of 1994. Experience with this law is too recent to assess practice, though there appears to be no public opposition within China.

Interestingly, substantial minorities of U.S. primary care physicians (36 per cent) and patients (31 per cent) favored government required premarital tests. They may have considered such tests an extension of the state-required premarital blood tests for syphilis that have long been standard in the U.S. Few U.S. or Northern European geneticists approved of mandatory tests, however.

Newborn Screening

In most nations, newborn screening programs are provided by the government, usually on a mandatory basis. The original purpose of newborn screening was to help the newborn by providing early diagnosis and treatment, especially when treatment must begin almost immediately after birth, as with PKU (phenylketonuria, an inherited metabolic disorder leading to profound retardation unless a special diet is instituted soon after birth). The rationale for newborn screening is shifting, however. Large majorities in all nations except Japan agreed that "an important goal of newborn screening is to identify and counsel parental carriers before the next pregnancy." Most patients (72 per cent) in the United States said that they would want their child screened for this purpose. In other words, newborn screening could be instituted for conditions where early diagnosis does not benefit the newborn but parental carriers could be identified and effectively prevented (through counseling) from conceiving another child. As newborn screening is usually a government-mandated program, this would amount to a government program of screening instituted to influence reproduction. Geneticists in most nations were not willing to go this far, however. When asked whether

would not benefit the newborn), geneticists in most nations said no. Exceptions were Greece, Portugal, Russia, China, India, and Thailand. U.S. patients also balked at the idea of a government requirement; only 26 per cent favored it. In the future, however, inexpensive multiplex tests will make it attractive for governments to add to their lists of newborn screens, and some conditions may be included mainly to identify parental carriers. In many nations, as noted earlier, the counseling will be directive.

In sum, geneticists in most nations, with the exception of China and India, oppose mandatory sterilization. There is some support for premarital carrier testing or using newborn screening primarily as an opportunity for counseling. In most nations, except China, there did not appear to be widespread support for government involvement through law. The Chinese "Law on Maternal and Infant Health Care" (1994), which has been widely criticized as eugenic because it appears to require premarital genetic counseling for couples at risk, followed by sterilization if the professional deems it necessary, is the world's unique example of legally-coerced eugenics today, but this law carries no penalties and is apparently not being enforced.

Views on Disability

Geneticists around the world took a pessimistic view of disability. Over two-thirds in all nations except Spain agreed that "some disabilities will never be overcome, even with maximum social support." Majorities in most nations (the Netherlands, Cuba, and Japan were notable exceptions) thought that "society will probably never provide adequate support for people with disabilities." Although it may appear to be a truism with regard to some genetic disorders, this question was asked because members of the disability community in the United States argued that all disabilities, and their effects on the family, could be overcome if only society would provide enough money. In most nations few (0–24 per cent) thought that "the existence of people with severe disabilities makes society more rich and varied." In 16 nations fewer than 10 per cent agreed with this statement. Exceptions were Chile (44 per cent), Finland (42 per cent), Switzerland (50 per cent), Germany (38 per cent), Poland (37 per cent), United Kingdom (36 per cent), France and Canada (29 per cent). Responses in Chile, Poland, and Switzerland were affected by strong anti-abortion or anti-prenatal diagnosis movements, in the U.K. and Canada by disability rights movements, and in Germany by the memory of the Third Reich. In all nations except Colombia, Venezuela, Turkey, China, Japan, and Thailand, most thought that "if a couple has a child with a disability, the primary responsibility for care usually falls on the mother." Women professionals outside the United States, perhaps empathizing with the mother, took a generally more pessimistic view than men, a view that extended to prenatal counseling

Primary care physicians and patients (most of whom were parents) in the United States held similarly pessimistic views of disability to those of genetics professionals.

Disparities between Professionals and Laypeople

Patients saw many issues quite differently from genetics professionals. On the one hand, the patients, who were mostly women, tended to be more conservative than genetics professionals with regard to their own use of abortion. Among the 72 per cent of patients who thought abortion should be legal for purposes other than saving the mother's life or rape or incest, majorities would abort for nine of 24 fetal conditions, which were described in lay terms: anencephaly (88 per cent), severe retardation with death in first few months of life (81 per cent), severe retardation (unable to speak or understand) with normal lifespan (77 per cent), sickle-cell anemia with painful crises (72 per cent), maternal rubella (German measles) (68 per cent), AIDS (64 per cent), paralyzed from neck down but not retarded (63 per cent), high risk of mental illness that disrupts relationships (59 per cent), and cystic fibrosis (52 per cent). When the 28 per cent who thought abortion should be illegal other than for saving the mother's life, or rape or incest, are included in the total, majorities would abort for four conditions: anencephaly, severe retardation with early death, severe retardation with normal lifespan, and sickle-cell anemia with painful crises. In comparison, majorities of U.S. genetics professionals would themselves have abortions for 13 of 24 conditions listed, and over 40 per cent would abort for an additional four conditions. Conditions for which fewer than 40 per cent would abort were cleft lip and palate in a boy (the same in a girl), child not of the sex desired, severe obesity, predisposition to alcoholism, predisposition to mental illness, and predisposition to Alzheimer disease. (That the last four cannot currently be diagnosed prenatally may have lowered the percents who would abort.) Clearly there is greater reluctance to abort on the part of those receiving counseling than on the part of those providing counseling, at least in the United States. We do not know the extent to which providers are aware of these differences.

On the other hand, patients were more willing than geneticists to involve the government in order to protect future children. About one-fifth (21 per cent) thought laws should require sterilization for a single mother on welfare at 50 per cent risk of having a blind child; 21 per cent favored involuntary hospitalization for a pregnant woman with PKU who cannot stay on a special diet that could protect her unborn child; 19 per cent thought she should be legally charged with child abuse; 31 per cent thought premarital genetic tests should be required.

More patients (44 per cent) and primary care physicians (55 per cent) than U.S.

minorities of both patients (44 per cent) and U.S. geneticists (40 per cent) agreed that bringing this child into the world was unfair to the child itself.

In sum, patients, though considerably more reluctant than geneticists to use abortion themselves, were more likely to favor government intervention on behalf of future children. Patients were also more likely to think in terms of effects on society, rather than only in terms of the doctor-patient or parent-child relationship. Patients were perhaps responding from the viewpoint of mothers (as most were) and taxpayers; there was no evidence that they were thinking of eliminating genetic conditions generally.

Conclusions

"Eugenic thought," if interpreted as a desired eugenic outcome based upon individual decisions, underlies genetic practice in much of the world today. Individual eugenics is achieved through presentation of purposely slanted information in counseling, sometimes accompanied by openly directive advice. The "non-directive" counseling found in English-speaking nations is an aberration from most approaches found elsewhere.

Although professionals often justify their approach by claiming that patients expect and ask for guidance, and although this may be true (as evidenced by patients' responses in North America), patients do not ask for or expect slanted information to be presented as "facts." The "individual eugenics" found in many countries today is not the benign "free choice" or "laissez faire" eugenics envisaged by Kitcher (1996).

Government coercion appears to play a minor role, or no role at all, in modern eugenics, at least as perceived by most members of the genetics profession. On the other hand, governments may not need to play a eugenic role, if professionals are already doing so.

There may be a fine line between individual professional-patient encounters and state intervention if professionals are paid by the state, and if the state analyzes counseling and prenatal diagnosis for their cost-effectiveness. In some countries private insurance companies may play the cost-accounting role of the state in encouraging what amounts to eugenic practice.

Nations with the most pessimistic counseling and the greatest interest in government involvement are mostly developing nations. In the future, it is possible that these nations will be better able to support persons with disabilities and will become less coercive and less concerned about "birth quality" as a social issue. It is also possible that they will follow a world trend in genetic ethics toward greater respect for people's autonomy, a trend that became apparent in comparing responses to an earlier survey in 1985 (Wertz and Fletcher 1989; Wertz, Fletcher, and Mulvihill 1990) with a set of questions about autonomy (reported elsewhere) in the

Asia, ethics has always been based on harmony with social needs rather than on individual rights and will probably remain so (Qiu 1994).

A strong counter-trend against autonomy is likely in most nations, however, including those such as the United States, which favor nondirective counseling. In the future, most genetics services will be provided by primary care physicians, obstetricians, pediatricians, family or general practitioners — not by specially trained medical geneticists or genetic counselors. In most of medicine, doctors are trained to give advice about treatment or lifestyle changes. The nondirective "educational encounter" found in genetics has always been an aberration from traditional medical practice. As genetics becomes part of general medicine, there will likely be greater directiveness.

Another scenario is possible in the future. Developed nations may encounter economic difficulties and may become more interested in a form of eugenics that uses economic measures to influence people's choices. Both culturally coerced and government coerced eugenics flourish in a climate of economic depression (Allen 1989). The ideals of individual choice proposed by Kitcher, which I support, may be difficult to sustain.

Acknowledgements

The international survey was supported by grant RO1-HG00540-02 from the Ethical, Legal, and Social Implications Branch of the National Human Genome Research Institute of the National Institutes of Health, Bethesda, Maryland. The geneticist, primary care physician, and patient surveys in the United States were supported by contract NO1-HD-1-3136 from the Mental Retardation and Developmental Disorders Branch of the National Institute of Child Health and Human Development (National Institutes of Health).

We would like to thank our international colleagues who distributed and collected the questionnaires: Elba Giorgiutti, Instituto de Genética y Medicina Prenatal, Buenos Aires, Argentina; John G. Rogers, Murdoch Institute, Melbourne, Australia; Jules G. Leroy, University of Ghent, Belgium; Francisco M. Salzano, Instituto de Biociências, UFRGS, Porto Alegre, Brazil; Elizabeth J. Ives, Memorial University of Newfoundland, St. John's, NF, Canada; Ricardo Cruz-Coke, Universidad de Chile, Santiago, Chile; Qiu Ren-zong, Chinese Academy of Social Sciences, Beijing; Mao Xin, Haddow Laboratories, Sutton, UK; Alejandro Giraldo, Fundación Arthur Stanley Gillow, Bogotá, Colombia; Luis Heredero Baute, Centro Nacional Genética Médica, Habana, Cuba; Jana Zidovská, Dolní Brezany, Czech Republic; Søren Nørby, Institute of Forensic Genetics, Copenhagen, Denmark; Ilkka Kaitila, Helsinki University Hospital, Finland; Claire M. Julian-Reynier, INSERM, Marseille, France; Ségolène Ayme, INSERM, Villejuif, France; Irmgard Nippert, Westfälische Wilhelms-Universität, Münster, Germany;

Children's Hospital, Greece; Andrew E. Czeizel, National Institute for Health Promotion, Budapest, Hungary; Ishwar C. Verma, Sir Ganga Ram Hospital, New Delhi, India; Zully Gelman-Kohan, Kaplan Hospital, Rehovot, Israel; Antonio Cão and Christina Rosatelli, Università degli Studi di Cagliari, Italy; Rubén Lisker, Instituto Nacional de la Nutrición, Mexico, D.F.; Koji Ohkura, Tokyo University of Medicine and Dentistry, Japan; Leo P. ten Kate, Free University, Amsterdam, the Netherlands; Kåre Berg, University of Oslo, Norway; Teresa Pérez de Gianella, Centro Médico Especializado Genética, Lima, Peru; Jacek Zaremba, Institute of Psychiatry & Neurology, Warsaw, Poland; M. da Purificação Valenzuela Tavares, Universidade do Porto, Portugal; Vladimir Ilich Ivanov, National Scientific Research Centre for Medical Genetics, Moscow, Russia; Trefor Jenkins and Jennifer G. R. Kromberg, University of the Witwatersrand, Johannesburg, South Africa; Carlos San Román, Hospital Universitario Ramón y Cajal, Madrid, Spain; Magnus Nordenskjöld, Karolinska Hospital, Stockholm, Sweden; Ulf Kristoffersson and Göran Hermerén, University Hospital, Lund, Sweden; Hansjakob Mueller, University Children's Hospital, Basel, Switzerland; Orasri Romayanan, Chulalongkorn University, Bangkok, Thailand; Isik Bökesoy, University of Ankara, Turkey; Rodney Harris, St. Mary's Hospital, Manchester, UK; Jorge Vargas-Arenas, Valencia, Venezuela.

References

- Allen, Garland E. 1989. "Eugenics and American Social History." *Genome* 31:885-889.
- Cohen, Pamela, and Dorothy C. Wertz. 1997. "Genetic Counseling Practices in Germany: A Comparison Between East German and West German Geneticists." *Journal of Genetic Counseling* 6:61-80.
- Fraser, F. Clarke. 1974. "Genetic Counselling." *American Journal of Human Genetics* 26:636-661.
- Kitcher, Philip. 1996. *The Lives to Come*. New York: Simon and Schuster.
- Mao, Xin, and Dorothy C. Wertz. 1997. "China's Genetic Service Providers' Attitudes Towards Several Ethical Issues: A Cross-Cultural Survey." *Clinical Genetics* 52:100-109.
- Mill, J. S. 1855 [1991]. *On Liberty and Other Essays*. Oxford: Oxford University Press.
- Paul, Diane B. 1992. "Eugenic Anxieties, Social Realities, and Political Choices." *Social Research* 59:663-683.
- Qiu, Ren-Zong. 1994. "Medical Ethics and Chinese Culture." In *Transcultural Dimensions in Medical Ethics*, edited by Edward Pellegrino, 155-174. Washington: Georgetown University Press.

- on New Reproductive Technologies, *New Reproductive Technologies: Ethical Aspects*, 191–332.
- . 1997a. "Is There a 'Women's Ethic' in Genetics? A 37-Nation Survey of Providers," *Journal of the American Medical Women's Association* 52:33–38.
- . 1997b. "Society and the Not-So-New Genetics: What Are We Afraid Of?" *Journal of Contemporary Health Law and Policy* 13:299–346.
- . 1997c. "International Perspectives on Privacy and Access to Genetic Information." *Microbial and Comparative Genomics* 2:53–61.
- Wertz, Dorothy C., and John C. Fletcher. 1989. *Ethics and Human Genetics: A Cross-cultural Perspective*. Heidelberg: Springer-Verlag.
- . 1993. "A Critique of Some Feminist Challenges to Prenatal Diagnosis." *Journal of Women's Health* 2:173–188.
- . 1998. "Ethical and Social Issues in Prenatal Sex Selection." *Social Science and Medicine* 46:255–273.
- Wertz, Dorothy C., John C. Fletcher and John J. Mulvihill. 1990. "Medical Geneticists Confront Ethical Dilemmas: Cross-cultural Comparisons A18 Nations." *American Journal of Human Genetics* 46:1200–1213.

*Division of Social Science, Ethics and Law
Shriver Center, Waltham, Massachusetts*

EUGENIC STERILIZATION IN INDIANA

In the early 1900's the advocates of sterilization for eugenic purposes began to encourage state legislatures to enact compulsory sterilization statutes. They contended that through the use of sterilization, the surgical

58. See text following n. 31.

59. *Daugherty v. Herzog*, 145 Ind. 255, 44 N.E. 12 (1896).

means by which both the male and female are rendered incapable of reproduction,¹ propagation by the mentally ill and mentally deficient could be prevented, and thereby, the birth of children with similar mental characteristics could be reduced. Although heredity factors in mental illness and mental deficiencies were considered significant prior to the turn of the century, the impetus for the movement at that particular time can probably be best explained by the fact that practical and satisfactory methods of sterilization had only recently been developed.² Doctor Harry C. Sharpe of the Indiana State Reformatory is credited with developing a method for sterilizing males known as vasectomy during the 1890's,³ while a standard method of sterilizing females, known as salpingectomy, was developed in Europe at about the same time.⁴ Indiana was the first state in the United States to accept eugenic sterilization; the legislature enacting a compulsory statute in 1907.⁵ The statute remained in effect until 1921 when the Indiana Supreme Court in *Williams v. Smith*⁶ held that the initial legislative attempt violated procedural due process under the fourteenth amendment of the federal constitution because it failed to give the patient an opportunity for a hearing or the right to cross-examine the doctors who had made the decision that the sterilization operation was necessary. Subsequent to the *Williams* decision, however, procedurally refined statutes providing for the sterilization of the mentally ill and mentally defective were enacted and remain a part of the present law of Indiana.⁷

Even though the first of the contemporary Indiana sterilization statutes was enacted in 1927 it is interesting to learn that there have been no reported decisions testing either the substantive or the procedural

1. See LINDMAN & MCINTYRE, *THE MENTALLY DISABLED AND THE LAW* 183 (1961).

2. "Before the end of the 19th century, sterilization was impractical, since castration, the only method known at that time, caused undesirable changes in secondary sexual characteristics and was usually considered too radical an operation in view of the results." O'Hara & Sanks, *Eugenic Sterilization*, 45 *Geo. L.J.* 20 (1956). Today, however, sterilization of the male can be satisfactorily carried out in a surgeon's office under local anesthesia, by means of small scrotal skin incisions through which segments of the vas deferens are removed, and the proximal ends of the vas are tied. There is no mortality and almost no discomfort. The operation is more serious in the female, requiring an abdominal operation, under general anesthesia, in which the physician enters the abdominal cavity, removes segments of the Fallopian tubes and ties off the cut ends. Mortality rate is nearly zero with modern surgical methods. See GUTTMACHER & WEIHOFEN, *PSYCHIATRY AND THE LAW* 200 (1952).

3. See GOSNEY & POPENOE, *STERILIZATION FOR HUMAN BETTERMENT* 77 (1931); Donnelly & Ferber, *The Legal and Medical Aspects of Vasectomy*, 81 *J. UROLOGY* 259 (1959).

4. See GOSNEY & POPENOE, *op. cit. supra* note 3, at 70.

5. See Ind. Acts 1907, ch. 215.

6. 190 Ind. 526, 131 N.E. 2 (1921).

7. See Ind. Acts 1927, ch. 241; Ind. Acts 1931, ch. 50; Ind. Acts 1935, ch. 12.

aspects of the existing statutes. Although it may be argued that the constitutionality of the substantive aspects of eugenic sterilization was established in 1927, when the United States Supreme Court upheld a Virginia sterilization statute in *Buck v. Bell*,⁸ it should be pointed out that concepts concerning the importance of hereditary factors in mental disorders have undergone substantial change since that decision was handed down. The absence of any serious legal controversy over a normally controversial subject raises three significant questions. First, it is necessary to consider the actual application of the Indiana statutes dealing with eugenic sterilization. Secondly, it is important to determine whether the existing laws, measured by contemporary scientific knowledge, are fulfilling a valid purpose. Finally, it is necessary to consider, in light of the application and desirability of the existing statutes, possible legislative abandonment or modification of the Indiana sterilization laws.

THE APPLICATION OF THE INDIANA EUGENIC STERILIZATION STATUTES

There are twenty-eight states which have sterilization laws.⁹ Twenty-six of the statutes are compulsory and authorize sterilization of a patient without his consent if the statutory procedure is observed.¹⁰ In 1961 there were 561 sterilization operations reported by the states having sterilization laws, bringing the cumulative total of recorded operations in the United States under such laws to 62,723.¹¹ Under the Indiana statutes there were only three reported sterilization operations in 1961, bringing the total of sterilization operations reported to 1,576 since 1936,¹² of which 870 involved female patients and 706 involved male patients.¹³ Although the United States cumulative total appears large, during the past fifteen years eugenic sterilization has been on the decline in the nation.¹⁴ In Indiana there has been a noticeable drop in sterilization operations since 1957.¹⁵

The three Indiana sterilization statutes are compulsory in form and are applicable to persons (1) in the care or custody of any hospital or other institution of the state,¹⁶ or who are applicants to enter the state

8. 274 U.S. 200 (1927).

9. The states are Alabama, Arizona, California, Connecticut, Delaware, Georgia, Idaho, Indiana, Iowa, Kansas, Maine, Michigan, Minnesota, Mississippi, Montana, Nebraska, New Hampshire, North Carolina, North Dakota, Oklahoma, Oregon, South Carolina, Utah, Vermont, Virginia, West Virginia, Wisconsin.

10. HUMAN BETTERMENT ASS'N OF AMERICA, INC., STERILIZATIONS REPORTED IN THE UNITED STATES THROUGH DEC. 31, 1961, (1962).

11. See HUMAN BETTERMENT ASS'N OF AMERICA, INC., *op. cit. supra* note 10.

12. See Appendix A *infra*.

13. *Ibid.*

14. See O'Hara & Sanks, *supra* note 2, at 35.

15. See Appendix A *infra*.

16. See IND. ANN. STAT. § 22-1601 (Burns 1950).

institutions for feeble-minded,¹⁷ or who are applicants for commitment to state institutions for the insane¹⁸ and (2) who are found to be afflicted with "... hereditary forms of insanity that are recurrent, epilepsy, or incurable primary or secondary types of feeble-mindedness."¹⁹

Since, in Indiana, sterilization is authorized for both patients in the custody of a hospital or institution and applicants for commitment to state institutions for the feeble-minded or insane, distinctive methods are provided for the initiation of sterilization proceedings. In the case of an institutionalized patient, the proceedings are commenced by an application from the superintendent of the institution in which the patient is confined, to the Commissioner of Mental Health who is responsible for holding the sterilization hearings.²⁰ In the case of an applicant for state feeble-minded and mental institutions, the necessity of sterilization is determined in conjunction with the circuit court proceedings ordering a commitment of the applicant.²¹

Since the statutory language authorizing sterilization on the basis of (1) an administrative hearing or (2) a court order is very broad, official discretion becomes an important factor in Indiana sterilization. The initiation of administrative hearing with the filing of an application rests with the discretion of the superintendent of the hospital or institution which is caring for the patient.²² Unlike the first sterilization statute which was declared unconstitutional, the present statutes adequately safeguard the procedural rights of the patient by providing him with adequate notice that a sterilization hearing is to be held,²³ an extensive hearing to determine if sterilization is required,²⁴ the right to

17. See IND. ANN. STAT. § 22-1608 (Burns 1950).

18. See IND. ANN. STAT. § 22-1613 (Burns 1950).

19. IND. ANN. STAT. § 22-1601 (Burns 1950).

20. See IND. ANN. STAT. § 22-5007 (Burns Supp. 1961). The hearings are usually held before the Commissioner of Mental Health, the superintendent of the school or hospital which has custody of the patient and the Deputy Attorney General of Indiana assigned to the Mental Health Department. This is a departure from the previous Indiana procedure, which authorized the superintendent of school or institution to submit the petition for sterilization to the governing board of the school or institution, for an administrative hearing. See IND. ANN. STAT. § 22-1602 (Burns 1950).

Twenty-three states, including Indiana, commence sterilization proceedings with a petition by the superintendent of the institution in which the patient is confined. See LINDMAN & MCINTYRE, *op. cit. supra* note 1, at 192-94. A majority of the states use an administrative agency to act upon the applications, with a patient right to appeal to the state judicial system. For a comparative analysis of the statutory provisions of the various states see LINDMAN & MCINTYRE, *op. cit. supra* note 1, at 184-85, 192-94.

21. See IND. ANN. STAT. §§ 22-1608, -1614 (Burns 1950).

22. A superintendent can petition for sterilization "[w]henever . . . [he is] . . . of the opinion that it is for the best interests of the patient and of society. . . . IND. ANN. STAT. § 22-1601 (Burns 1950).

23. See IND. ANN. STAT. § 22-1602 (Burns Supp. 1962).

24. *Ibid.*

appeal to the circuit court²⁵ and the right to petition the Indiana Supreme Court for a review of the circuit court hearing.²⁶ Likewise, when a court, in considering a commitment application to either a state hospital for the insane or a state school for the feeble-minded, concurrently hears evidence concerning the need for sterilization, the judge has broad discretion in determining whether such sterilization serves the best interests of society and the interests of the patient.²⁷ The procedural rights of the applicant are also protected in the case of a court ordered sterilization since he is afforded the same right of appeal as is authorized in any other civil proceedings.²⁸

As has been indicated, the Indiana sterilization law is composed of three separate acts with amendments and, as a result, in providing the patient with procedural safeguards and in setting forth statutory requirements, the statutes have become unnecessarily lengthy and conflict in certain respects.

For example, the act of 1931 deals with persons whose admission to feeble-minded institutions is sought. Prior to its amendment, it provided that the applicants should be examined and that a determination of the need for sterilization should be made by the examining physicians at the time of the application.²⁹ The examination provision, section 22-1607, was repealed in 1955.³⁰ Section 22-1608, however, is still in effect and authorizes the committing court, as part of the judgment and decree committing the feeble-minded person, to order the sterilization of the applicant. In light of the repeal of section 22-1607 a question arises as to what basis the court uses in determining that sterilization of the applicant to the feeble-minded institution is necessary. It may be that section 22-1608 should be read in conjunction with section 22-1742³¹ which concerns applications to Fort Wayne and Muscatatuck, the two state schools for feeble-minded. Under the latter statute, however, the examining physicians only certify to the judge that the applicant is feeble-minded, as opposed to insane. No mention is made as to the ad-

25. The inmate or his guardian shall, within 30 days of an order for sterilization have an appeal as a matter of right to the circuit court of the county in which the institution is located. IND. ANN. STAT. § 22-1602 (Burns Supp. 1962).

26. The pendency of an appeal to the court operates to stay the sterilization proceedings. IND. ANN. STAT. § 22-1604 (Burns 1950).

27. See IND. ANN. STAT. §§ 22-1608, -1614 (Burns 1950). It would appear that even though a court might not order a sterilization in conjunction with a commitment order under § 22-1608 or § 22-1614, a superintendent would not be barred subsequently from instituting proceedings under authority of § 22-1601.

28. See IND. ANN. STAT. §§ 22-1608, -1614 (Burns 1950).

29. IND. ANN. STAT. § 22-1607 (Burns 1950).

30. See Ind. Acts 1955, ch. 339, § 15.

31. IND. ANN. STAT. § 22-1742 (Burns 1950).

visability of a sterilization operation. Whether section 22-1742 is broad enough to offer a basis for a court ordered sterilization is open to question and has yet to be resolved in the courts.

To add to the confusion over the repeal of the feeble-minded applicant examination provision, a provision similar to the section 22-1607 sterilization examination provision was enacted in the act of 1935. The latter act deals with the examination of insane persons pursuant to an application for court commitment and is still in effect.³² There appears to be no valid reason for the repeal, in the case of feeble-minded applicants, and retention, in the case of insane applicants, of a preliminary examination provision, since in both situations a court has to answer the identical question of the need for sterilization.

Another inconsistency between the separate acts is found in regard to the immunity of physicians from liability growing out of sterilization operations. Both the 1927 act for institutionalized persons and the 1931 act for the feeble-minded applicant immunize a superintendent or any other person legally participating in the sterilization of a patient from possible civil and criminal liability for their actions.³³ The 1935 act for the insane applicant, however, only grants civil immunity,³⁴ and leaves the question of possible criminal liability unanswered.

It would seem that at a minimum the Indiana Legislature should consolidate and eliminate the inconsistencies in its present sterilization statutes. Other states have enacted sterilization statutes which are much more concise than the Indiana statutes, do not contain conflicting provisions and yet provide the patient with all the procedural safeguards enumerated in the existing Indiana statutes.³⁵

Although the sterilization act of 1907 was ruled unconstitutional in 1921 by the Indiana Supreme Court, the constitutionality of the present sterilization acts has never been tested. This may be explained partially on the ground that most sterilization hearings are non-adversary proceedings.³⁶ An additional reason may lie in the fact that, although the Indiana statutes are compulsory in nature, they are being applied

32. See IND. ANN. STAT. § 22-1613 (Burns 1950).

33. See IND. ANN. STAT. §§ 1605, -1611 (Burns 1950).

34. See IND. ANN. STAT. § 22-1617 (Burns 1950).

35. See, e.g., CAL. WELFARE & INST'NS CODE, § 6624 (West 1956). The California Code sets forth its sterilization law in five paragraphs covering two pages of print, as compared to sixteen sections covering seven pages in the Indiana statutes.

36. "The lack of representation by counsel in sterilization proceedings is undoubtedly a partial explanation for the infrequency of legal contests in sterilization areas," LINDMAN & MCINTYRE, *op. cit. supra* note 1, at 190.

on a voluntary basis.³⁷ The voluntary application would seem attributable to the fact that although the language of the statute grants broad power, it also allows significant discretion in administration of the power and the decision to sterilize is therefore carefully weighed by the Department of Mental Health.³⁸ Whether individual discretion is a controlling factor in these cases is undetermined; however, a noticeable drop in sterilization operations performed is observable between 1956 and 1957 when the administration of the Mental Health Department changed hands. This drop may possibly be explained on the basis of different attitudes on the part of medical persons as to the scientific validity of hereditary factors in mental health.³⁹ Since the number of court ordered sterilizations constitutes a relatively minor part of the total sterilization operations in Indiana,⁴⁰ it would seem that committing courts drastically restrict the use of their sterilization powers.

THE VALIDITY OF HEREDITY AS A BASIS FOR STERILIZATION

There are several basic reasons advanced as grounds for sterilization: (1) therapeutic purposes based on sound medical practice, as in the case of a woman with a heart condition, kidney defect, advanced diabetes or other serious physical complications;⁴¹ (2) social birth control;⁴² (3) punitive measures authorizing sterilization of hereditary criminals and sex offenders;⁴³ and (4) eugenic purposes. Most of the sterilization statutes which have been enacted in the United States, however, have been only directed at hereditarily feeble-minded, insane and epileptic persons,⁴⁴ are grounded on the prevention of procreation for eugenic reasons⁴⁵ and provide for compulsory sterilization.⁴⁶ While there is general agreement

37. The Commissioner of Mental Health stated that in each case where an operation was authorized, the family of the patient had either requested it or were in full agreement after the matter was explained. Letter from Dr. S. T. Ginsburg, Mental Health Commissioner to the *Indiana Law Journal*, March 30, 1962.

38. The Commissioner in his letter stated: "... I approach each hearing with a recognition of the seriousness of the matter and with a feeling of great responsibility. I approach each hearing not only as the Mental Health Commissioner with responsibility to comply with the law, but also as a physician with profound regard for the welfare of the patient, the family and the community." *Ibid.*

39. "... [W]hile there is sufficient evidence to show that mentally deficient persons have more subnormal children than do persons of normal intelligence, it is also recognized that, in addition to the hereditary factor, there are other causes for mental deficiency, including birth injuries and thyroid deficiency." LINDMAN & MCINTYRE, *supra* note 1, at 186.

40. See Appendix A *infra*.

41. See Donnelly & Ferber, *supra* note 3, at 259.

42. See GUTTMACHER & WEIHOFEN, *op. cit. supra* note 2, at 188.

43. See LINDMAN & MCINTYRE, *op. cit. supra* note 1, at 183.

44. See Myerson, *Summary of the Report of the American Neurological Association Committee for the Investigation of Sterilization*, 1 AM. J. M. JURIS. 253 (1938).

45. See O'Hara & Sanks, *supra* note 2, at 43. See generally Appendix B *infra*.

46. See note 10 and accompanying text *supra*.

as to the validity and need for sterilization based on medical determination and administered upon a therapeutic basis, eugenic sterilization has faced constitutional attack on several grounds.⁴⁷ Even though the United States Supreme Court in *Buck v. Bell*⁴⁸ upheld the validity of the substantive law of sterilization, the contemporary question of the substantive constitutionality depends upon the continuing scientific validity of the standards upon which the statutes are based.⁴⁹ Since most of the statutes are directed toward hereditary factors,⁵⁰ the problem lies in the accurate determination of what mental illnesses and mental deficiencies may be accurately classified as "hereditary."

"Heredity is that [either physical or mental] which is passed from parent to child through the chromosomes and the genes."⁵¹ It is upon this theory that advocates of eugenic sterilization have advanced arguments favoring compulsory sterilization laws.⁵²

During the first twenty years of this century the theory of institutional care grounded on the protection of the patient from the dangers of society was abandoned. It was replaced with the attitude that the protection of society from the problems caused by the mentally disordered should be paramount in the institutionalization of mentally ill and defective persons.⁵³ This change in attitude gave rise to several notions

47. Sterilization legislation has faced constitutional attack on the following grounds: (1) substantive due process, involving broad issues of public policy and the basic scientific validity of eugenic sterilization; (2) equal protection, involving the scope and limitation of the statutes in their designation of persons covered by such laws; (3) procedural due process, with attention of the courts being directed to matters of hearings, notice, counsel and appeal; and (4) the avoidance of cruel and unusual punishment, under statutes which designate "hereditary criminals" and sex offenders as persons subject to compulsory sterilization. LINDMAN & MCINTYRE, *op. cit. supra* note 1, at 187.

48. 274 U.S. 200 (1927). "It has commonly been assumed that . . . [*Buck v. Bell*] . . . broadly sustains the constitutionality of sterilization laws as against the due process argument, but it is not at all clear how far the present court would go in cases where the evidence of inheritability is less convincing." GUTTMACHER & WEIHOFEN, *op. cit. supra* note 2, at 194.

49. GUTTMACHER & WEIHOFEN, *op. cit. supra* note 2, at 189.

50. Myerson, *supra* note 43, at 253.

51. LANDIS, TEXT BOOK OF ABNORMAL PSYCHOLOGY 256 (1946).

52. Arguments advanced by eugenicists:

(1) Socially inadequate persons, i.e., the feeble-minded, the epileptics, the insane . . . are inimical to the human race. They perpetuate their deficiencies and thus threaten the quality of the ensuing generations. (2) Nations must defend themselves against national degeneration as much as against the external foreign enemy. (3) Regardless of the indefiniteness of the laws of heredity, there are numbers of habitual criminals and defective delinquents who should be prevented from procreating because of the fact that they are manifestly unfit for rearing children.

Landman, *The History of Human Sterilization in the United States—Theory, Statute, Adjudication*, 23 ILL. L. REV. 463, 465 (1928).

53. DEUTSCH, THE MENTALLY ILL IN AMERICA 368 (1949).

regarding mental health which gave impetus to the eugenic movement.⁵⁴ Institutional care became a means of segregating persons from society and preventing them from propagating. It became evident that segregation as a eugenical means was unsatisfactory because the cost of institutionalizing all mentally ill and mentally deficient persons would be economically unfeasible. In addition it would seem questionable to institutionalize a person simply to keep him from propagating, when other factors did not require such care.

Eugenic sterilization gained in importance as a result of the change in the institutional care theory and the economic unfeasibility of segregation by institutionalization.⁵⁵ With its increasing use, however, many questions were raised concerning the validity of heredity as a factor in mental illnesses and deficiencies, and in 1936 an extensive investigation was conducted by the American Neurological Association under the leadership of Doctor Abraham Myerson. As a result of this investigation the committee, unable to absolutely relate hereditary factors to mental illness and mental deficiency, recommended that sterilization only be performed in selected cases of certain diseases, with the consent of the patient or those responsible for him.⁵⁶ The committee further recommended (1) that the laws should be made voluntary rather than compulsory, (2) that sterilization laws be made applicable not only to patients in state institutions, but to those in private institutions and those at large in the community and (3) that a permanent committee be organized to conduct scientific research in the field of mental disorders.⁵⁷ Doctor Myerson later commented that "... the bulk of feeble-mindedness is utterly unknown as to genus, pathology and disorders of physiology. I stress this because it is insufficient to say 'heredity' is a cause, since heredity is no unified set of mechanisms."⁵⁸

Notwithstanding the early impetus toward compulsory sterilizations,

54.

... [T]he following notions regarding mental defect dominated the first 20 years of the century: (1) This condition represented a major menace to civilization; (2) it was mainly hereditary in origin; (3) drastic action was required to check its incidence; (4) a preventive program must be sought in cutting off the defective germ plasm from the human race; (5) segregation and sterilization afforded the two principal means for attaining this end.

Ibid.

55. See DEUTSCH, *op. cit. supra* note 53, at 368.

56. Myerson, *supra* note 44, at 256.

57. *Ibid.*

58. Myerson, *Certain Medical and Legal Phases of Eugenic Sterilization*, 52 YALE L.J. 618, 622 (1943). The author stated that "[M]any myths have been developed in the field of feeble-mindedness which have no scientific basis whatever." *Ibid.* "When we turn to vaguely understood diseases and ascribe them to heredity, we are at least in part explaining one unknown by another." *Id.* 623.

several factors have played an important part in limiting the application of such laws. First, in light of the scientific knowledge gained from investigations, such as Doctor Myerson's, the medical profession has re-evaluated its early position concerning the importance of hereditary factors in mental disorders and has adopted a new position in regard to eugenic sterilization.⁵⁹ The basic tenet in the adoption of the new position is based on scientific findings that not as many disorders are attributable to hereditary factors as was supposed in the infancy of the compulsory sterilization movement.⁶⁰ In addition to the diminution of the hereditary factor as a basis of mental illness and mental deficiencies, it has been determined that environment plays an important part in such disorders.⁶¹ Sterilization has been advocated on the basis of environmental effects on the ground that mental defectives and habitual criminals in most cases make poor parents; that "... the task of parenthood in a complex society is difficult enough without this throw back."⁶² In regard to the declining scientific validity of heredity and the increasing concern about environment in sterilization, it has been suggested that a hereditary-environmental basis for sterilization may be stronger factually and, therefore, stronger constitutionally, than the earlier overemphasis on heredity as the causal factor in mental illnesses and deficiencies.⁶³

The position for limiting the use of eugenic sterilization has recently been affirmed in a report by a medical association committee on mental health in South Dakota which made the following statement concerning heredity in sterilization cases:

Medical science has by no means established that heredity is a factor in the development of mental diseases with the possible exception of a very few and rare disorders. The committee holds that the decision to sterilize for whatever reason, should be left up to the free decision reached by the patient and family

59. "Today, in view of our scant scientific data on the laws of human heredity in respect to defective stock, and socially dangerous uses that can be made of too little knowledge, it is well to hold ambitious schemes such as eugenic sterilization in abeyance until a more opportune time." DEUTSCH, *op. cit. supra* note 53, at 377.

60. O'Hara & Sanks, *Eugenic Sterilization*, 45 GEO. L.J. 20, 37 (1956).

61. "Much work has been done in the field of physiological genetics to show that environment at all times plays a role in the evolution and evocation of hereditary qualities and that a drastic change of environment may call into play what seem like opposing or at least markedly different hereditary qualities." Myerson, *supra* note 58, at 623. See GUTTMACHER & WEIHOFEN, *PSYCHIATRY AND THE LAW* 195 (1952); JENNINGS, *THE BIOLOGICAL BASIS OF HUMAN NATURE* 124 (1930).

62. GUTTMACHER & WEIHOFEN, *op. cit. supra* note 61, at 196.

63. See GUTTMACHER & WEIHOFEN, *op. cit. supra* note 61, at 196.

physician mutually and that the state has no good reason to trespass in this area.⁶⁴

Furthermore, in order to ascertain the sentiments of both professional and lay people concerning sterilization statutes, a survey was conducted by Doctor Fred O. Butler in 1950.⁶⁵ At the Second International Congress of the American Association of Mental Deficiency he listed the following suggestions for reform of the sterilization laws: (1) there was a need for more standardization in establishing an acceptable criteria for the basis of sterilization and (2) there was indicated a desire to have sterilization laws apply to the mentally disordered who were not in institutions as well as to patients of such institutions. In addition, it was reported by Doctor Butler that there was a general overall fear that compulsory sterilization laws would place too much power in the hands of the appointed agency.⁶⁶

Doctor Butler's survey is but one indication of the concern about sterilization, since in many qualified groups there has been increasing opposition to the sterilization of the mentally disordered on moral, theological, social and scientific grounds.⁶⁷

Finally, even the eugenists, who consider eugenic sterilization a desirable means of obtaining their objective, realize that there is a danger that extensive sterilization may become a "perilous weapon,"⁶⁸ since they now realize that there are many limitations on the validity of eugenics.

In view of (1) the changing attitude of the medical profession as to the importance of hereditary factors in mental disorders, (2) the general attitude of both professional and lay persons concerning the application of eugenic sterilization statutes, (3) the awareness of eugenists, themselves, as to potential dangers of their theories and (4) in light of the fact that sterilization operations violate the bodily integrity of the person and are generally permanent in effect, a careful evaluation of the standards upon which sterilization is ordered must be made in order to protect the rights of the person. Therefore, states may be well advised to re-examine their sterilization statutes, in light of present medical

64. S.D. MEDICAL ASS'N MENTAL HEALTH COMM'N, EXPLANATION OF PROPOSED NORTH DAKOTA MENTAL HEALTH ACT 9 (1959).

65. See Butler, *Sterilization in the United States*, 56 AM. J. MENTAL DEFICIENCY 360 (1951).

66. *Id.* at 362.

67. "The majority of psychiatrists in America do not advocate the sterilization of the mentally disordered, except perhaps where both husband and wife have been definitely psychotic." GUTTMACHER & WEIHOFEN, *op. cit. supra* note 61, at 193. See DEUTSCH, *op. cit. supra* note 53, at 367; S.D. MEDICAL ASS'N, MENTAL HEALTH COMM'N, *op. cit. supra* note 64, at 9.

68. DEUTSCH, *op. cit. supra* note 53, at 373.

knowledge, to consider possible abandonment or modification of the statutes.⁶⁹

THE REFORMATION OF EXISTING STERILIZATION STATUTES

In regard to future compulsory sterilization legislation it has been suggested that (1) the statutes be restricted in scope to a fairly narrow category of cases, including only those illnesses for which there is strong supporting evidence of inheritability or (2) if the laws grant broad sterilization power, there should be a hearing to determine if the mentally ill or defective person's condition is in fact inheritable.⁷⁰ The problem is not in distinguishing those diseases and deficiencies that are inheritable from those that are not, but rather in *predicting* accurately that a given disease or deficiency will be transmitted through heredity in a given case. For example, primary feeble-mindedness is capable of being transmitted hereditarily. It is not possible, however, to definitely state that an offspring of such a person also will be feeble-minded. About all that can be predicted is that there is a greater probability that the offspring of a feeble-minded person will be born with a similar affliction, than is the probability that a normal person will have an offspring afflicted with some form of deficiency.⁷¹ It is the difficulty of resolving the probability into some accurate standard of predictability which gives rise to the question of the substantive constitutionality of compulsory sterilization laws which seek to prevent the procreation of an offspring who might inherit some form of mental disorder. It is, also, the lack of predictability that strengthens the position for voluntary sterilization of the mentally ill and mentally deficient, especially when sterilization is applied as a step toward rehabilitation of the patient, rather than eugenically for the purpose of preventing the birth of a child with a similar affliction.

A sound community-oriented basis upon which voluntary sterilization might be predicated is the rehabilitation of the patient with a view toward his release into the community. Although a mentally deficient person may be able to look after his own needs, he may be inadequate in coping with the problems of rearing a family in a demanding society.⁷² Voluntary sterilization could free the person from this anxiety and enable

69. "Legislators generally have shown an amazing ignorance of the purpose and utility of eugenic measures. In enacting laws on sterilization, they have frequently rushed in where scientists fear to tread, and have claimed a knowledge of laws of heredity far beyond the reaches as yet attained by the humble scientist." DEUTSCH, *op. cit. supra* note 53, at 375.

70. GUTTMACHER & WEIHOFEN, *op. cit. supra* note 61, at 196.

71. See generally GUTTMACHER & WEIHOFEN, *op. cit. supra* note 61, at 194; LANDIS, *op. cit. supra* note 51, at 256.

72. See note 62 and accompanying text *supra*.

him to adequately fit into the community. Although a community oriented basis for voluntary sterilization is sound, it would seem that the better program of voluntary sterilization would also focus on the problems of the patient and his family, as a personal non-community matter. Such a program has been advocated by the Human Betterment Association of America. In addition to concern over community problems, it advocates orientation of a voluntary sterilization program to the problems of the health and well-being of the couple and the family and has promoted a threefold program of education, research and service in the field of voluntary sterilization.⁷³

Since a fundamental purpose in the treatment and education of the mentally disordered is rehabilitation, a voluntary sterilization statute drafted with rehabilitation in mind would be a definite step toward making the law compatible with the current psychological and social ideas for treating mental disorders. Future statutes should also reach those persons in the community who can show an actual need for sterilization, whether based on mental disorders or some other valid ground, in order to meet the objection that the present laws that apply only to patients and applicants of mental institutions are too narrow.⁷⁴

Notwithstanding the arguments for applying sterilization laws on a voluntary rather than compulsory basis, present laws must be examined in view of the fact that they are predominantly compulsory. It would seem that several recommendations can be made in regard to existing compulsory statutes to make them relatively compatible with present scientific knowledge. First, a re-evaluation of the statutory grounds upon which compulsory sterilization is based should be made. Secondly, the basic rights of the patient must be fully protected through an adequate procedural system which would take into account the facts of each individual case. And finally, continued scientific research must be directed at relating mental disorders with hereditary factors if eugenic sterilization laws are to have a valid basis.

73. The program of the Association is:

(1) *Education*. To develop professional and public understanding of the meaning and use of voluntary sterilization and the contribution it can make toward the solution of family and community problems. (2) *Research*. To participate in and encourage fact-finding studies of the medical, legal, psychological and socio-economic aspects of sterilization. (3) *Service*. To refer individuals to qualified specialists when sterilization is requested and has been approved by the Association's Medical Committee; to provide financial assistance for those unable to pay for these medical services.

HUMAN BETTERMENT ASS'N OF AMERICA, INC., *STERILIZATION FOR HUMAN BETTERMENT* (1959).

74. See Butler, *supra* note 65, at 362.

The Indiana statutes procedurally seem to safeguard the rights of a patient, but in light of the present attitude of the medical profession these statutes conceivably could face a strong constitutional argument if challenged on a substantive basis. However, due to the cautious attitude of the Department of Mental Health, and its awareness of the serious problems underlying involuntary sterilization, the Indiana statutes may avoid a constitutional test for an indefinite period of time. This is especially true in view of the fact that Indiana's compulsory sterilization law is in reality being applied upon a voluntary basis.

REPORT OF STERILIZATIONS
INDIANA STATE PSYCHIATRIC HOSPITALS and SCHOOLS FOR
THE RETARDED 1936 to March 1962*

YEAR	PATIENT BY SEX		INSTITUTION		BASIS OF ORDER		
	Male	Female	School	Hospital	Hearing	Court Order	Unknown
1962	1	1		2	2		
1961		3		3	3		
1960	1	14		15	15		
1959	1	6		7	7		
1958	2	14		16	13	3	
1957	8	12	8	12	5	6	9
1956	12	24	24	12	22	4	10
1955	45	48	73	20	34	3	56
1954	42	47	80	9	53		36
1953	26	20	45	1	14		32
1952	26	18	43	1	23		21
1951	23	27	50		6		44
1950	45	43	88		1		87
1949	16	27	43		1		42
1948	36	23	59		2		57
1947	15	37	52		17		35
1946	77	82	159		39		120
1945	66	57	123		51		72
1944	29	48	77		45		32
1943	21	33	53	1	33	1	20
1942	51	46	75	22	32	2	63
1941	32	63	54	41	30	9	56
1940	65	67	60	72	31	14	87
1939	20	38	40	18	21	14	23
1938	19	43	36	26		22	40
1937	13	22	15	20		1	34
1936	14	7		21			21
TOTALS							
(1576)	706	870	1257	310	500	79	997

* Reproduced with the permission of the Dept. of Mental Health, State of Indiana.

APPENDIX A
TYPES OF STATE LAWS**

STATE	Voluntary ¹	Compulsory ²	Voluntary & Compulsory ³	Extra-mural ⁴	Eugenics Boards ⁵
Alabama		X			
Arizona		X			
California		X			
*Connecticut		X			
Delaware		X		X	
Georgia		X			X
Idaho		X		X	X
Indiana		X			
Iowa		X		X	X
*Kansas		X			
Maine			X		
Michigan		X		X	
Minnesota			X		
Mississippi		X			
Montana		X			X
Nebraska		X			
New Hampshire		X			
North Carolina			X	X	X
North Dakota		X			
Oklahoma		X			
Oregon		X		X	X
South Carolina		X			
South Dakota		X	X	X	
*Utah		X		X	
Vermont	X				
Virginia			X		
West Virginia		X			
Wisconsin		X			

** Reproduced with permission of Human Betterment Association of America, Inc.

* Section included which prohibits sterilizations not within the statutes.

1. Consent of defective person, spouse or guardian required.

2. Consent of defective person not required.

3. Law contains provision for either voluntary or compulsory.

4. Law contains provision for individuals outside of institutions.

5. Authorization agency for sterilization operation. (Other states: operations passed on by designated state agencies.)

APPENDIX B